

SEQUENCE LISTING

<110> Curtis, Rory A.J.

<120> 58297, AN AMINO ACID TRANSPORTER AND
USES THEREFOR

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<151> 2001-1-18

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Glu Val Asp His Glu Arg Asp Pro Gly Pro Met Asn Ile Gln Phe Glu
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Pro Ser Asp Leu Arg Ser Lys Arg Pro Phe Cys Ile Glu Pro Thr Asn
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Cys Tyr Val Tyr Ser Pro Leu Gly Ser Ala Tyr Lys Leu Gln Ser Tyr
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Leu	Leu	Thr	Leu	Tyr	Cys	Cys	Tyr	Arg	Val	Val	Lys	Ser	Arg	Thr	Met	
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2007-01-01 01:00:00

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 Asp Leu Arg Ser Lys Arg Pro Phe Cys Ile Glu Pro Thr Asn Ile Val
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Cys	Gly	Leu	Ala	Phe	Val	Phe	Ile	Tyr	Pro	Ser	Leu	Ile	Tyr	Ile	Ile	
		515					520					525				
tcc	ctc	cac	caa	gaa	gag	cgt	ctg	aca	tgg	cct	aaa	tta	atc	ttc	cac	1632
Ser	Leu	His	Gln	Glu	Glu	Arg	Leu	Thr	Trp	Pro	Lys	Leu	Ile	Phe	His	

530	535	540	
gtt ttc atc atc att ttg ggc gtg gct aac ctg att gtt cag ttt ttt			1680
Val Phe Ile Ile Ile Leu Gly Val Ala Asn Leu Ile Val Gln Phe Phe			
545	550	555	560
atg			1683
Met			
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<211> 467			
<212> PRT			
<213> Homo sapiens			
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Ala His Leu Arg Glu Val Met Gly Gly Asn Asn Ser Ser Val Phe Lys			
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Gln Leu Gly Trp Ile Pro Gly Leu Val Leu Leu Leu Val Gly Phe			
20	25	30	
Ile Thr Leu Tyr Gly His Phe Thr Gly Leu Leu Leu Val Lys Cys Tyr			
35	40	45	
Glu Glu Glu Gly Glu Tyr Val Pro Gly Lys Arg Glu Gly Ala Lys Ser			
50	55	60	
Tyr Leu Asp Leu Gly Arg Gln Ser Ala Tyr Gly Gly Lys Gly Leu Leu			
65	70	75	80
Leu Thr Ser Phe Val Gly Thr Gly Val Gln Tyr Val Asn Leu Phe Gly			
85	90	95	
Val Asn Ile Gly Tyr Leu Ile Leu Ala Gly Asp Leu Leu Pro Lys Ile			
100	105	110	
Ile Ser Ser Phe Leu Cys Phe Leu Leu Ile Gln Val Gly Asp Asn Val			
115	120	125	
Gly Val Ser Gly Asp Ile Gly Cys Asp Leu Leu Ser Gly Asn Ser Trp			
130	135	140	
Ile Ile Ile Phe Ala Ala Ile Ile Ile Thr Pro Leu Ser Phe Ile Pro			
145	150	155	160
Ala Phe Asn Leu Leu Ser Ala Ser Asn Leu Leu Ser Leu Ser Val Leu			
165	170	175	
Ile Ile Ser Ser Leu Ser Ala Phe Ser Ser Leu Ala Tyr Ile Ser Ile			
180	185	190	
Ile Ser Phe Leu Ile Val Val Ala Val Ile Ala Gly Ile Phe Val Leu			
195	200	205	
Leu Gly Ala Val Tyr Lys Ile Leu Trp Ser Val Glu Thr Leu Ala Val			
210	215	220	
Thr Val Pro Ser Val Thr Lys Leu Thr Gly Leu Phe Leu Ala Ile Gly			
225	230	235	240
Ile Ile Val Phe Ala Phe Glu Gly His Ala Val Leu Leu Pro Ile Gln			
245	250	255	
Asn Thr Met Lys Ser Pro Ser Glu Pro Glu Phe Lys Lys Phe Lys Lys			
260	265	270	
Val Leu Asn Val Ala Ile Ile Ile Val Thr Val Leu Tyr Ile Leu Val			
275	280	285	
Gly Phe Val Gly Tyr Leu Thr Phe Gly Asn Ser Val Lys Asp Asn Ile			
290	295	300	
Leu Leu Asn Phe Lys Leu Leu Pro Asn Asn Pro Phe Trp Leu Ile Val			
305	310	315	320
Asn Leu Asn Leu Val Ala Ile Leu Leu Thr Phe Pro Leu Gln Cys			
325	330	335	
His Pro Val Phe Ala Phe Pro Ile Val Arg Ile Leu Glu Asn Lys Leu			
340	345	350	
Lys Arg Arg Phe Asp Asn Asn Lys Leu Leu Thr Lys Lys Asn Asn Phe			
355	360	365	
Ala Pro Lys Asn Thr Gly Asp Pro Lys Ser Lys Leu Leu Arg Val Val			
370	375	380	
Ile Arg Ser Gly Leu Val Val Val Thr Leu Leu Ile Ala Ile Leu Val			
385	390	395	400
Pro Phe Leu Gly Asp Leu Leu Ser Leu Val Gly Ala Thr Ser Gly Ala			
405	410	415	

Pro Leu Thr Phe Ile Leu Pro Pro Leu Phe Glu Met Tyr Ile Leu Leu
 420 425 430
 Lys Lys Glu Lys Lys Trp Gly Lys Gly Glu Lys Pro Lys Glu Val Leu
 435 440 445
 Arg Arg Trp Pro Lys Leu Ile Asp Leu Ile Ile Ile Val Val Gly Leu
 450 455 460
 Leu Leu Ser
 465

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 <211> 505
 <212> PRT
 <213> Mus musculus

<400> 5
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 Lys His Leu Glu Gly Leu Leu Pro Val Gly Val Pro Thr Thr Asp Thr
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 Gln Arg Thr Glu Asp Thr Gln His Cys Gly Glu Gly Lys Gly Phe Leu
 35 40 45
 Gln Lys Ser Pro Ser Lys Glu Pro His Phe Thr Asp Phe Glu Gly Lys
 50 55 60
 Thr Ser Phe Gly Met Ser Val Phe Asn Leu Ser Asn Ala Ile Met Gly
 65 70 75 80
 Ser Gly Ile Leu Gly Leu Ala Tyr Ala Met Ala Asn Thr Gly Ile Ile
 85 90 95
 Leu Phe Leu Phe Leu Leu Thr Ala Val Ala Leu Leu Ser Ser Tyr Ser
 100 105 110
 Ile His Leu Leu Leu Lys Ser Ser Gly Ile Val Gly Ile Arg Ala Tyr
 115 120 125
 Glu Gln Leu Gly Tyr Arg Ala Phe Gly Thr Pro Gly Lys Leu Ala Ala
 130 135 140
 Ala Leu Ala Ile Thr Leu Gln Asn Ile Gly Ala Met Ser Ser Tyr Leu
 145 150 155 160
 Tyr Ile Ile Lys Ser Glu Leu Pro Leu Val Ile Gln Thr Phe Leu Asn
 165 170 175
 Leu Glu Lys Pro Ala Ser Val Trp Tyr Met Asp Gly Asn Tyr Leu Val
 180 185 190
 Ile Leu Val Ser Val Thr Ile Ile Leu Pro Leu Ala Leu Met Arg Gln
 195 200 205
 Leu Gly Tyr Leu Gly Tyr Ser Ser Gly Phe Ser Leu Ser Cys Met Val
 210 215 220
 Phe Phe Leu Ile Ala Val Ile Tyr Lys Lys Phe Gln Val Pro Cys Pro
 225 230 235 240
 Leu Ala His Asn Leu Ala Asn Ala Thr Gly Asn Phe Ser His Met Val
 245 250 255
 Val Ala Glu Glu Lys Ala Gln Leu Gln Gly Glu Pro Asp Ala Ala Ala
 260 265 270
 Glu Ala Phe Cys Thr Pro Ser Tyr Phe Thr Leu Asn Ser Gln Thr Ala
 275 280 285
 Tyr Thr Ile Pro Ile Met Ala Phe Ala Phe Val Cys His Pro Glu Val
 290 295 300
 Leu Pro Ile Tyr Thr Glu Leu Lys Asp Pro Ser Lys Arg Lys Met Gln
 305 310 315 320
 His Ile Ser Asn Leu Ser Ile Ala Val Met Tyr Val Met Tyr Phe Leu
 325 330 335
 Ala Ala Leu Phe Gly Tyr Leu Thr Phe Tyr Asp Gly Val Glu Ser Glu
 340 345 350
 Leu Leu His Thr Tyr Ser Lys Val Asp Pro Phe Asp Val Leu Ile Leu
 355 360 365
 Cys Val Arg Val Ala Val Leu Ile Ala Val Thr Leu Thr Val Pro Ile
 370 375 380
 Val Leu Phe Pro Val Arg Arg Ala Ile Gln Gln Met Leu Phe Gln Asn
 385 390 395 400
 Gln Glu Phe Ser Trp Leu Arg His Val Leu Ile Ala Thr Gly Leu Leu
 405 410 415
 Thr Cys Ile Asn Leu Leu Val Ile Phe Ala Pro Asn Ile Leu Gly Ile

Variable	Mean	SD	Min	Max
Age	38.5	10.5	25	55
Gender	1.0	0.0	0	1
Marital Status	1.0	0.0	0	1
Education	12.5	1.5	10	15
Income	3500	1500	1000	6000
Health	1.0	0.0	0	1
Smoking	0.5	0.5	0	1
Alcohol	0.5	0.5	0	1
Exercise	0.5	0.5	0	1
Stress	0.5	0.5	0	1
Sleep	0.5	0.5	0	1
Diet	0.5	0.5	0	1
Work	0.5	0.5	0	1
Family	0.5	0.5	0	1
Friends	0.5	0.5	0	1
Hobbies	0.5	0.5	0	1
Travel	0.5	0.5	0	1
Religion	0.5	0.5	0	1
Politics	0.5	0.5	0	1
Philosophy	0.5	0.5	0	1
Art	0.5	0.5	0	1
Music	0.5	0.5	0	1
Sports	0.5	0.5	0	1
Gardening	0.5	0.5	0	1
Reading	0.5	0.5	0	1
Writing	0.5	0.5	0	1
Cooking	0.5	0.5	0	1
Crafting	0.5	0.5	0	1
Volunteering	0.5	0.5	0	1
Charity	0.5	0.5	0	1
Philanthropy	0.5	0.5	0	1
Activism	0.5	0.5	0	1
Leadership	0.5	0.5	0	1
Management	0.5	0.5	0	1
Entrepreneurship	0.5	0.5	0	1
Investment	0.5	0.5	0	1
Real Estate	0.5	0.5	0	1
Technology	0.5	0.5	0	1
Science	0.5	0.5	0	1
History	0.5	0.5	0	1
Geography	0.5	0.5	0	1
Language	0.5	0.5	0	1
Mathematics	0.5	0.5	0	1
Physics	0.5	0.5	0	1
Chemistry	0.5	0.5	0	1
Biology	0.5	0.5	0	1
Medicine	0.5	0.5	0	1
Law	0.5	0.5	0	1
Business	0.5	0.5	0	1
Economics	0.5	0.5	0	1
Psychology	0.5	0.5	0	1
Sociology	0.5	0.5	0	1
Anthropology	0.5	0.5	0	1
Archaeology	0.5	0.5	0	1
Environmental Science	0.5	0.5	0	1
Political Science	0.5	0.5	0	1
Communication	0.5	0.5	0	1
Journalism	0.5	0.5	0	1
Public Relations	0.5	0.5	0	1
Marketing	0.5	0.5	0	1
Advertising	0.5	0.5	0	1
Design	0.5	0.5	0	1
Architecture	0.5	0.5	0	1
Engineering	0.5	0.5	0	1
Computer Science	0.5	0.5	0	1
Information Technology	0.5	0.5	0	1
Software Development	0.5	0.5	0	1
Systems Administration	0.5	0.5	0	1
Network Engineering	0.5	0.5	0	1
Database Administration	0.5	0.5	0	1
IT Support	0.5	0.5	0	1
Quality Assurance	0.5	0.5	0	1
Product Management	0.5	0.5	0	1
Project Management	0.5	0.5	0	1
Operations Management	0.5	0.5	0	1
Supply Chain Management	0.5	0.5	0	1
Logistics Management	0.5	0.5	0	1
Warehouse Management	0.5	0.5	0	1
Inventory Management	0.5	0.5	0	1
Purchasing Management	0.5	0.5	0	1
Procurement Management	0.5	0.5	0	1
Contract Management	0.5	0.5	0	1
Legal Management	0.5	0.5	0	1
Compliance Management	0.5	0.5	0	1
Risk Management	0.5	0.5	0	1
Insurance Management	0.5	0.5	0	1

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Met	Glu	Ile	Pro	Arg	Gln	Thr	Glu	Met	Val	Glu	Leu	Val	Pro	Asn	Gly	
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Lys	His	Leu	Glu	Gly	Leu	Leu	Pro	Val	Gly	Met	Pro	Thr	Ala	Asp	Thr	
			20					25					30			
Gln	Arg	Ala	Glu	Asp	Ala	Gln	His	Cys	Gly	Glu	Gly	Lys	Gly	Phe	Leu	
		35				40						45				
Gln	Gln	Ser	Ser	Ser	Lys	Glu	Pro	His	Phe	Thr	Asp	Phe	Glu	Gly	Lys	
	50					55					60					
Thr	Ser	Phe	Gly	Met	Ser	Val	Phe	Asn	Leu	Ser	Asn	Ala	Ile	Met	Gly	
65					70					75					80	
Ser	Gly	Ile	Leu	Gly	Leu	Ala	Tyr	Ala	Met	Ala	Asn	Thr	Gly	Ile	Ile	
				85					90					95		
Leu	Phe	Leu	Phe	Leu	Leu	Thr	Ala	Val	Ala	Leu	Leu	Ser	Ser	Tyr	Ser	
			100					105					110			
Ile	His	Leu	Leu	Leu	Lys	Ser	Ser	Gly	Ile	Val	Gly	Ile	Arg	Ala	Tyr	
		115						120				125				
Glu	Gln	Leu	Gly	Tyr	Arg	Ala	Phe	Gly	Thr	Pro	Gly	Lys	Leu	Ala	Ala	
	130					135					140					
Ala	Leu	Ala	Ile	Thr	Leu	Gln	Asn	Ile	Gly	Ala	Met	Ser	Ser	Tyr	Leu	
145					150					155					160	
Tyr	Ile	Ile	Lys	Ser	Glu	Leu	Pro	Leu	Val	Ile	Gln	Thr	Phe	Leu	Asn	
				165					170					175		
Leu	Glu	Lys	Pro	Thr	Pro	Val	Trp	Tyr	Met	Asp	Gly	Asn	Tyr	Leu	Val	
			180					185					190			
Ile	Leu	Val	Ser	Val	Ile	Ile	Ile	Leu	Pro	Leu	Ala	Leu	Met	Arg	Gln	
		195					200					205				
Leu	Gly	Tyr	Leu	Gly	Tyr	Ser	Ser	Gly	Phe	Ser	Leu	Ser	Cys	Met	Val	
	210					215					220					
Phe	Phe	Leu	Ile	Ala	Val	Ile	Tyr	Lys	Lys	Phe	Gln	Val	Pro	Cys	Pro	
225					230					235					240	
Leu	Ala	His	Asn	Leu	Val	Asn	Ala	Thr	Gly	Asn	Phe	Ser	His	Met	Val	
				245					250					255		
Val	Val	Glu	Glu	Lys	Ser	Gln	Leu	Gln	Ser	Glu	Pro	Asp	Thr	Ala	Glu	
			260					265					270			
Ala	Phe	Cys	Thr	Pro	Ser	Tyr	Phe	Thr	Leu	Asn	Ser	Gln	Thr	Ala	Tyr	
		275						280				285				
Thr	Ile	Pro	Ile	Met	Ala	Phe	Ala	Phe	Val	Cys	His	Pro	Glu	Val	Leu	
	290					295					300					
Pro	Ile	Tyr	Thr	Glu	Leu	Lys	Asp	Pro	Ser	Lys	Arg	Lys	Met	Gln	His	
305					310					315					320	
Ile	Ser	Asn	Leu	Ser	Ile	Ala	Val	Met	Tyr	Val	Met	Tyr	Phe	Leu	Ala	
				325					330							

385 390 395 400
 Glu Phe Ser Trp Leu Arg His Val Leu Ile Ala Val Gly Leu Leu Thr
 405 410 415
 Cys Ile Asn Leu Leu Val Ile Phe Ala Pro Asn Ile Leu Gly Ile Phe
 420 425 430
 Gly Val Ile Gly Ala Thr Ser Ala Pro Phe Leu Ile Phe Ile Phe Pro
 435 440 445
 Ala Ile Phe Tyr Phe Arg Ile Met Pro Thr Glu Lys Glu Pro Ala Arg
 450 455 460
 Ser Thr Pro Lys Ile Leu Ala Leu Cys Phe Ala Met Leu Gly Phe Leu
 465 470 475 480
 Leu Met Thr Met Ser Leu Ser Phe Ile Ile Ile Asp Trp Ala Ser Gly
 485 490 495
 Thr Ser Arg His Gly Gly Asn His
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<210> 8
 <211> 476
 <212> PRT
 <213> Homo sapiens

<400> 8
 Met Glu Leu Gln Asp Pro Lys Met Asn Gly Ala Leu Pro Ser Asp Ala
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 Val Gly Tyr Arg Gln Glu Arg Glu Gly Phe Leu Pro Ser Arg Gly Pro
 20 25 30
 Ala Pro Gly Ser Lys Pro Val Gln Phe Met Asp Phe Glu Gly Lys Thr
 35 40 45
 Ser Phe Gly Met Ser Val Phe Asn Leu Ser Asn Ala Ile Met Gly Ser
 50 55 60
 Gly Ile Leu Gly Leu Ala Tyr Ala Met Ala His Thr Gly Val Ile Phe
 65 70 75 80
 Phe Leu Ala Leu Leu Leu Cys Ile Ala Leu Leu Ser Ser Tyr Ser Ile
 85 90 95
 His Leu Leu Leu Thr Cys Ala Gly Ile Ala Gly Ile Arg Ala Tyr Glu
 100 105 110
 Gln Leu Gly Gln Arg Ala Phe Gly Pro Ala Gly Lys Val Val Val Ala
 115 120 125
 Thr Val Ile Cys Leu His Asn Val Gly Ala Met Ser Ser Tyr Leu Phe
 130 135 140
 Ile Ile Lys Ser Glu Leu Pro Leu Val Ile Gly Thr Phe Leu Tyr Met
 145 150 155 160
 Asp Pro Glu Gly Asp Trp Phe Leu Lys Gly Asn Leu Leu Ile Ile Ile
 165 170 175
 Val Ser Val Leu Ile Ile Leu Pro Leu Ala Leu Met Lys His Leu Gly
 180 185 190
 Tyr Leu Gly Tyr Thr Ser Gly Leu Ser Leu Thr Cys Met Leu Phe Phe
 195 200 205
 Leu Val Ser Val Ile Tyr Lys Phe Gln Leu Gly Cys Ala Ile Gly
 210 215 220
 His Asn Glu Thr Ala Met Glu Ser Glu Ala Leu Val Gly Leu Pro Ser
 225 230 235 240
 Gln Gly Leu Asn Ser Ser Cys Glu Ala Gln Met Phe Thr Val Asp Ser
 245 250 255
 Gln Met Ser Tyr Thr Val Pro Ile Met Ala Phe Ala Phe Val Cys His
 260 265 270
 Pro Glu Val Leu Pro Ile Tyr Thr Glu Leu Cys Arg Pro Ser Lys Arg
 275 280 285
 Arg Met Gln Ala Val Ala Asn Val Ser Ile Gly Ala Met Phe Cys Met
 290 295 300
 Tyr Gly Leu Thr Ala Thr Phe Gly Tyr Leu Thr Phe Tyr Ser Ser Val
 305 310 315 320
 Lys Ala Glu Met Leu His Met Tyr Ser Gln Lys Asp Pro Leu Ile Leu
 325 330 335
 Cys Val Arg Leu Ala Val Leu Leu Ala Val Thr Leu Thr Val Pro Val
 340 345 350
 Val Leu Phe Pro Ile Arg Arg Ala Leu Gln Gln Leu Leu Phe Pro Gly
 355 360 365
 Lys Ala Phe Ser Trp Pro Arg His Val Ala Ile Ala Leu Ile Leu Leu

370	375	380
Val Leu Val Asn Val Leu Val Ile Cys Val Pro Thr Ile Arg Asp Ile		
385	390	395
Phe Gly Val Ile Gly Ser Thr Ser Ala Pro Ser Leu Ile Phe Ile Leu		400
	405	410
Pro Ser Ile Phe Tyr Leu Arg Ile Val Pro Ser Glu Val Glu Pro Phe		415
	420	425
Leu Ser Trp Pro Lys Ile Gln Gly Cys Gln Ala Trp Ile Met Ala Leu		430
	435	440
Ile Pro Thr Pro Thr Pro Trp Glu Glu Glu Glu Glu Glu Glu Glu		445
	450	455
Glu Glu Glu Glu Glu Glu Glu Glu Glu Glu Ala		460
465	470	475

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